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CENTRAL INTELLIGENCE AGENCY

REPORT NO.

INFORMATION REPORT

CD NO.

COUNTRY USSR (Ukrainian SSR)

DATE DISTR. 20 May 1952

SUBJECT Podzemgaz Coal Gasification Plant near
Lisichansk

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1. The coal seams and the Podzemgaz coal gasification installation were near the northwestern outskirts of Lisichansk (48°55'N/38°25'E), southwest of the highway to Proletarsk (48°57'N/38°23'E). The enterprise was called Podzemgaz (underground gas). The construction of the installation started at the beginning of World War II. The installations were rebuilt after the war and resumed operation in May 1948. The installation has been functioning properly since November 1948, although there were many technical difficulties at first. Preparations for an expansion of the plant were made late in 1949. *
2. The plant was surrounded by a wall and covered an area of about 1.5 sq km. The nearby coal seams were opened underground and were kept separate from each other. Combustion was started by electric ignition and was maintained by supplying oxygen. Each mine in operation had its own pumping installation which pumped the required oxygen to the various seams. The gases were conducted to the plant where the ammonia, tar, naphthalene, and benzol were removed. The purified gas was carried through a pipe line, about 80 cm in diameter, to the Don Soda plant in Verkhneye (48°53'N/38°28'E) located 6 km to the southeast. The pipe line was about 3 meters aboveground.
3. Shipments of the by-products, comprising ammonia, tar, naphthalene and benzol, left by rail. Unauthorized entrance to the plant, which was surrounded by a 2.5 meter-high wall, was prohibited. Authorized personnel were provided with special identification cards, which were renewed every three months and stamped every month. Unauthorized personnel were not allowed near the mines operated by the gasification plant. **

Comment. For location sketch of the Podzemgaz plant, see Annex. This sketch is information from source.

Comment. According to available information, the underground coal gasification plant near Lisichansk was tentatively put into operation during World War II. At that time the plant was equipped with a number of large containers for the products obtained by the gasification process. The hard coal of the Lisichansk deposits has a sulphur content ranging from 2.5 to 7.5 percent. The sulphur does not occur as an organic part of the coal, but chiefly in pyrite form. By burning the coal underground, the sulphur occurs as sulphur dioxide (SO₂) or sulphuric acid anhydride (SO₃) and must also be separated in the plant. As source does not mention

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elementary sulphur it is probable that sulphuric gases are converted into liquid acid. The entire production of the Podzemgaz plant is processed by the chemical plants in and around Lisichansk.



Comment. The city mentioned in the legend of the location sketch of the Podzemgaz Plant as Imeni L.L.Kaganovicha may possibly be Popasnaya (48-36N, 38-20E).

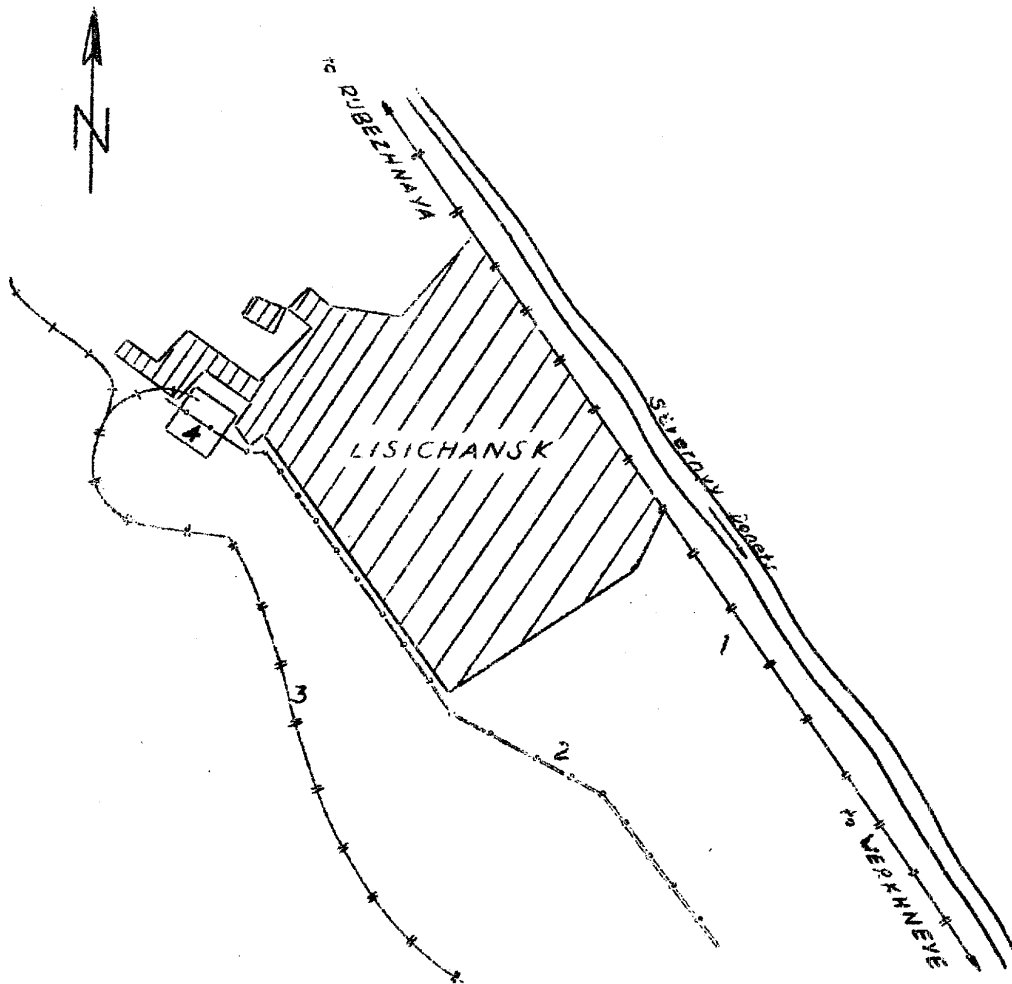
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Attachment

Location Sketch of the Podzemgaz Plant



SCALE: 1 : 50 000

Legend:

1. Kupyansk (49°42'N/37°38'E) - Ireni I.M.Kaganovicha (48°38'N/38°23'E) double-track railroad line.
2. Gas pipe line from the Podzemgaz plant to the Don Soda plant
3. Industrial railroad line. Double-track line in some sections.
4. Podzemgaz Coal Gasification plant.

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